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Employee Earnings and Hours, Australia methodology

Reference period May 2018

Released 22/01/2020

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Explanatory notes

Introduction

1 This release contains estimates from the 2018 Survey of Employee Earnings and Hours (EEH) which was conducted with respect to the last pay period on or before 18 May 2018.

2 The EEH survey is conducted every two years and designed to provide detailed statistics on the composition and distribution of employee earnings, hours paid for and the methods used to set employees' pay. Information is collected from a sample of employers about characteristics of both the employers (such as industry and sector) and their employees (such as occupation, type of employee, and method of setting pay). This information is used to provide comprehensive statistics about earnings and hours paid for, for various groups of employees, classified by, for example, industry, occupation or pay setting method.

3 The feature article [A Guide to Understanding Employee Earnings and Hours Statistics](https://abs.gov.au/articles/guide-understanding-employee-earnings-and-hours-statistics/latest) (<https://abs.gov.au/articles/guide-understanding-employee-earnings-and-hours-statistics/latest>) provides further information on how the data are collected, what statistics are

produced, key data available and factors to consider when using the data.

Concepts, sources and methods

4 Descriptions of the underlying concepts of employee earnings, hours paid for and methods of setting pay, and the sources and methods used in compiling these estimates, are presented in [Labour Statistics: Concepts, Sources and Methods \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001) (cat. no. 6102.0.55.001).

5 Estimates of employee earnings produced from the EEH Survey presented in this publication are based on the Australian conceptual framework for measures of employee remuneration. From 2006, the measure of employee earnings for estimates produced from the survey is regular wages and salaries in cash (including amounts salary sacrificed, where it is the choice of the employee to forgo part of wages and salaries in cash in return for goods and services), that is, cash earnings.

Scope and coverage

6 The survey covers all employing organisations in Australia (public and private sectors), except:

- the Australian permanent defence forces;
- enterprises primarily engaged in agriculture, forestry and fishing;
- private households employing staff; and
- foreign embassies, consulates, etc.

7 The employees of employers covered in the survey are in scope if they received pay for the reference period, except:

- employees paid solely under the Australian Government's Paid Parental Leave Scheme;
- employees who did not receive pay for the reference period (e.g. casuals who did not work during the reference period);
- non-salaried directors;
- working proprietors and partners of unincorporated businesses;
- self-employed persons such as subcontractors, owner/drivers or consultants;
- persons paid by commission only;
- employees based outside Australia; and
- employees on workers' compensation who are not paid through the payroll.

Survey methodology and design

8 The survey uses a two-stage sample selection approach. The first stage involves selecting a probability sample of employer units from the ABS Business Register (ABSBR). The statistical unit for the first stage comprises all activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit (TAU) (see paragraphs 14 - 25). Each statistical unit is classified to an industry which reflects the predominant activity of the business. The statistical units are stratified by state/territory, sector (private/public), industry, and employment size. Within each stratum statistical units are selected with equal probability. A sample of approximately 8,200 employer (selection) units was selected to ensure adequate industry and state/territory representation.

9 In the second stage the selected employers are asked to select a random sample of employees from their payrolls using instructions provided by the ABS. Data for approximately 53,000 employees contributed to the results in this publication.

ABS Economic Units Model

10 The Economic Units Model is used by the ABS to determine the structure of Australian businesses and other organisations. The model consists of:

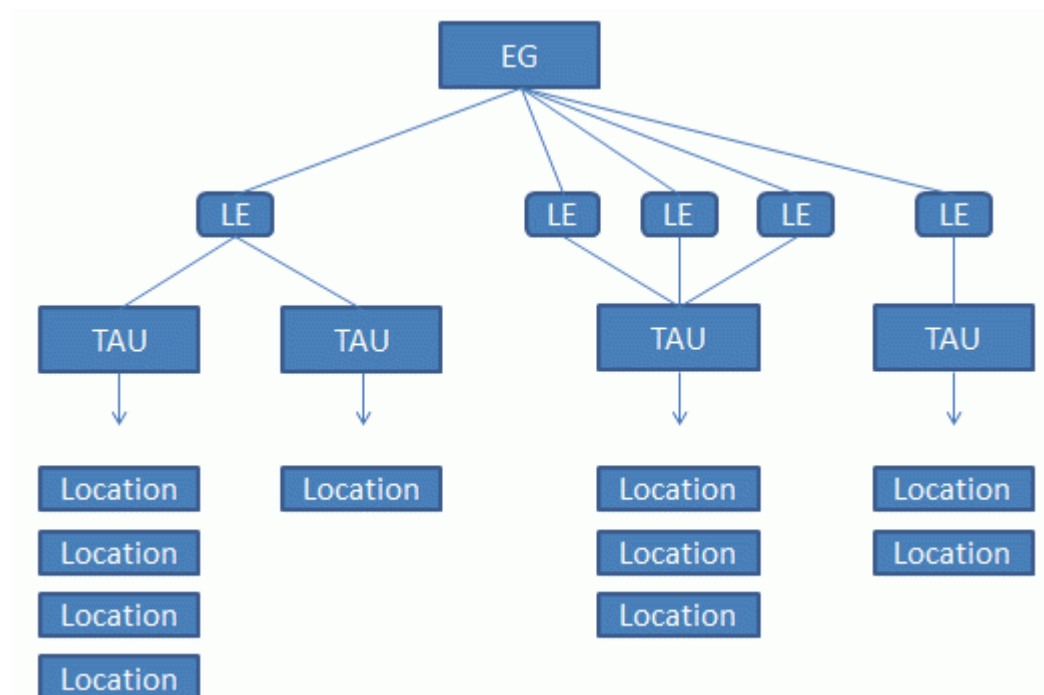
- The Enterprise Group (EG)
- Legal Entities (LEs)
- Type of Activity Units (TAUs)
- Location Units.

11 The EG and LE are institutional units and the TAU and Location are producing units.

12 The LE and the TAU are the main institutional and producing units used by the ABS to produce statistical outputs.

13 Diagram 1 illustrates the nature of the relationships between the different units within the model.

Diagram 1: ABS Economic Units Model*



* The legal entity (LE) statistical unit is generally equivalent to a single Australian Business Number registration

Unit definitions

14 The Legal Entity (LE) is an institutional unit covering all the operations in Australia of an entity which possesses some or all of the rights and obligations of individual persons or corporations, or which behaves as such in respect of those matters of concern for economic statistics. Examples of legal entities include companies, partnerships, trusts, sole (business) proprietorships, government departments and statutory authorities. Legal entities are institutional units. In most cases the LE is equivalent to a single ABN registration.

15 The Enterprise Group (EG) is an institutional unit that covers all the operations within Australia's economic territory of legal entities under common control. Control is defined in Corporations legislation. Majority ownership is not required for control to be exercised.

16 The Type of Activity Unit (TAU) comprises one or more Legal Entities, sub-entities or branches of a Legal entity that can report productive and employment activities. TAUs are created if accounts sufficient to approximate Industry Value Added (IVA) are available at the Australian and New Zealand Standard Industrial Classification (ANZSIC) subdivision level.

17 A Location is a producing unit comprised of a single, unbroken physical area from which an organisation is engaged in productive activity on a relatively permanent basis, or at which the organisation is undertaking capital expenditure with the intention of commencing

productive activity on a relatively permanent basis at some time in the future.

Classifications of units

18 Various classifications are applied to the units in the ABS Economic Units Model. The main classifications applied are:

- ANZSIC
- Type of Legal Organisation (TOLO)
- Type of Business Entity (TOBE)
- Standard Institutional Sector Classification of Australia (SISCA)
- Public / Private classification.

19 ANZSIC is used to classify the industry in which the TAU has productive activity. Further information on this classification can be found in [Australian and New Zealand Standard Industrial Classification, 2006 \(Revision 2.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>) (cat. no. 1292.0).

20 SISCA provides a framework for dividing the Australian economy into institutional sectors. Further information on this classification can be found in [Standard Economic Sector Classifications of Australia \(SESCA\), 2008 \(Version 1.1\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1218.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1218.0>) (cat. no. 1218.0).

ABS Business Register

21 The ABSBR is a list of businesses and organisations operating in Australia and is based on the Australian Business Register (ABR). Organisations are included on the ABR when they register for an ABN. The Commonwealth Government requires all government departments and agencies to make use of the ABR to reduce government imposed reporting load, and to use the ABN as the primary reference number for all dealings between government and business. The ABSBR is used to create frames for the various business surveys run by the ABS.

22 It is not practicable for the ABS Economic Units Model to be applied to all ABR registrants and the Model is organised into two parts; the profiled population, and the non-profiled population.

23 Profiled Population: Businesses and other organisations which are considered sufficiently complex and economically significant, are profiled according to the Economic Units Model. These enterprise groups typically have multiple legal entities, multiple TAUs and are among the largest contributors within industries.

24 Non-Profiled population: Businesses and other organisations with less complex structures. They are regarded as an enterprise group with a single legal entity and a single TAU in accordance with the Economic Units Model. Information for units in the non-profiled population is largely sourced from the ABR.

25 The two populations are mutually exclusive and cover all organisations in Australia which have registered for an ABN.

Industry classification

26 The statistics in this release are classified to industry in accordance with the [Australian and New Zealand Standard Industrial Classification, 2006 \(Revision 2.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>) (cat. no. 1292.0). This replaced the 1993 edition of ANZSIC in the August 2009 issue of this publication, which had been in use since 1994.

27 The 2006 edition of ANZSIC was developed to provide a more contemporary industrial classification system, taking into account issues such as changes in the structure and composition of the economy, changing user demands and compatibility with major international classification standards.

Occupation classification

28 Each employee in the survey is classified to an occupation based on their job title and duties. Since May 2014, the classification used in this release is [Australian and New Zealand Standard Classification of Occupations, 2013 \(Version 1.2\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0>) (cat. no. 1220.0). The classification used in EEH issues from May 2006 to May 2012 is the [Australian and New Zealand Standard Classification of Occupations \(First Edition\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F6A0BB67C088F217CA2575DF001CADC7?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F6A0BB67C088F217CA2575DF001CADC7?opendocument>) (cat. no. 1220.0). Data in EEH issues from 1996 to 2004 are based on the [Australian Standard Classification of Occupations 1997 \(Second Edition\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4B8C877612EC0AE4CA2571E5007A6B27?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4B8C877612EC0AE4CA2571E5007A6B27?opendocument>) (cat. no. 1220.0).

Managerial status

29 Employees have been classified as managerial if they have strategic responsibilities in the conduct or operations of the business and/or were in charge of a significant number of employees. These employees usually did not have an entitlement to paid overtime.

30 Care should be taken when comparing survey estimates based on ANZSCO groups with estimates based on the managerial status of employees. Estimates for employees with managerial status include employees classified to ANZSCO categories other than the

ANZSCO major group Managers; e.g. employees classified as Professionals according to ANZSCO may be categorised by employers as having managerial status. Conversely, tables in this publication which contain estimates for non-managerial employees (as defined by employers) include some employees classified to the ANZSCO major group Managers.

Methods of setting pay

31 Since the May 2000 survey, data on how employees' pay was set in the survey reference period have been collected along with data on whether agreements (individual or collective) were certified, approved or registered with an industrial tribunal or authority.

32 Since the May 2010 issue, EEH estimates of employees covered by the various pay setting methods and their associated pay outcomes have been compiled based on the workplace relations environment following the introduction of the Fair Work Act 2009 and the subsequent introduction of the Fair Work (State Referral and Consequential and Other Amendments) Act, which allowed for the extension of the Fair Work Act to states and territories that refer workplace relations related matters to the Commonwealth. Data in previous publications of this series issued since 2000 are based on the workplace relations environment prior to the introduction of this legislation. The Fair Work system replaced the Workplace Relations Amendment (Work Choices) Act 2005 that was in place for the August 2008 Survey of Employee Earnings and Hours.

33 Under the Fair Work system, the majority of employees come under the national workplace relations system. The following employers are generally covered by the national system:

- constitutional corporations (including a financial corporation - generally a financial or trading corporation formed in Australia or a foreign corporation that does business in Australia);
- the Commonwealth and Commonwealth authorities;
- all employers in the Australian Capital Territory or the Northern Territory;
- all employers in Victoria except for those that provide essential services of core government functions, including state infrastructure services such as electricity and gas.
- private sector employers in New South Wales, Queensland or South Australia;
- private sector or local government employers in Tasmania.

34 The following employers are generally not covered by the national system (unless the employer has a registered agreement in the national system):

- the Western Australian state public sector and non-constitutional corporations, in either

local government or private industry in the state;

- the state public sector and local government in New South Wales, Queensland and South Australia;
- the state public sector in Tasmania.

35 Employers not covered by the national system are covered by the relevant State Industrial Relations Commission.

36 Since 2010, information about the proportions of employees of employers in the national or state jurisdictions, as well as jurisdiction of registered agreements, are no longer published but may be available in the Confidentialised Unit Record File (CURF). See paragraphs 45 and 46 of the Explanatory Notes.

Employee estimates

37 From May 2010, estimates of numbers of employees by method of setting pay are presented in this release, to add context to other estimates by method of setting pay. Care should be taken in the interpretation and use of such estimates, as the Survey of Employee Earnings and Hours is not designed specifically to produce estimates of numbers of employees. Consideration should be given to the level of variance of the estimates of numbers of employees, which are available from the standard error tables in the Excel spreadsheet available from the Data downloads section of this release. Users are directed to [Labour Force, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) as the primary source for official ABS estimates of employment.

Comparability of results

38 Caution should be exercised when comparing estimates of numbers of employees from the Survey of Employee Earnings and Hours with those published monthly in [Labour Force, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) as there are a number of differences between the two collections. The Survey of Employee Earnings and Hours is a business survey that collects information from a sample of employers about their employees, whereas the Labour Force Survey is a household survey that collects information from the occupants of selected dwellings. The two collections use different sample design and survey methodologies and there are differences in scope and coverage. Users are directed to [Labour Force, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) as the primary source for official ABS estimates of employment. Detailed information about the concepts, sources and methods of the Survey of Employee Earnings and Hours and Labour Force Survey can be found in [Labour Statistics: Concepts, Sources and Methods \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001) (cat.

no. 6102.0.55.001).

39 From May 2006, estimates of employee earnings from the Survey of Employee Earnings and Hours have been produced on a cash basis, that is, inclusive of amounts salary sacrificed. This differs from estimates provided in previous issues, which excluded amounts salary sacrificed by employees. Estimates from the May 2004 and May 2002 surveys were reproduced on the new conceptual basis, and broad level estimates for these years were included in the electronic data release accompanying the May 2006 publication.

40 Care should be taken when comparing estimates of average weekly earnings from the Survey of Employee Earnings and Hours with those published biannually in [Average Weekly Earnings, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0) (cat. no. 6302.0). Headline estimates of average weekly earnings in that publication are presented on the previous conceptual basis (i.e. exclusive of amounts salary sacrificed), although Average Weekly Cash Earnings (inclusive of salary sacrifice) are available in data cubes accessed via the Data downloads section of [Average Weekly Earnings, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0) (cat. no. 6302.0). Additionally, the two collections use different sample design and survey methodologies. The Survey of Average Weekly Earnings collects information relating to the total gross earnings and the total number of employees of employer businesses selected in the survey. The average weekly earnings measures are derived by dividing total gross earnings by the number of employees. The Survey of Employee Earnings and Hours collects information about weekly earnings of a sample of employees within the employer businesses selected.

41 In addition to the Survey of Employee Earnings and Hours, the ABS produces earning statistics from a number of different sources (both household and employer surveys) which provide a wide range of data for a variety of purposes. The decision on which data to draw upon depends on the purpose and type of analysis to be undertaken. For further information on these other sources, please refer to the feature article [Understanding Earnings in Australia Using ABS Statistics \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/6310.0Main%20Features5August%202013?opendocument&tabname=Summary&prodno=6310.0&issue=August%202013&num=&view=\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/6310.0Main%20Features5August%202013?opendocument&tabname=Summary&prodno=6310.0&issue=August%202013&num=&view=) published in [Employee Earnings, Benefits and Trade Union Membership, Australia, August 2013 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0) (cat. no. 6310.0).

42 For the May 2014 Survey of Employee Earnings and Hours, the item Adult or Junior employee was modified, and further categories included. The new item 'rate of pay' has the following categories: adult rate; junior rate; apprentice or trainee rate; and disability rate. The previous Adult category included those employees aged 21 years and over who are not

paid the full adult rate of pay for their occupation, which includes those paid an apprentice/trainee or disability rate of pay. To a lesser extent, the previous Junior category included some employees aged under 21 who, while not paid an age related rate of pay, were not paid the full adult rate of pay, such as those paid an apprentice/trainee or disability rate of pay. This conceptual change has little impact on the estimate of earnings for employees paid at the Junior rate and is not statistically significant when the Adult rate is compared to the Adult category.

43 However, previous estimates for Employees paid at the adult rate of pay are not directly comparable to estimates produced in prior cycles for Adult Employees. In particular, results for Full-time non-managerial employees paid at the adult rate of pay are not directly comparable to results for Full-time non-managerial adult employees, due to the reasons described above. The closest approximation to allow comparison with data from 2012 and before would be to apportion those employees paid at the Apprentice/Trainee Rate and Disability Rate to the Adult or Junior categories based on the employee's reported age. Data on this broader aggregation of the rate of pay data item are presented in the [Supplementary Analysis \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/6306.0Main%20Features6May%202014?opendocument&tabname=Summary&prodno=6306.0&issue=May%202014&num=&view=\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/6306.0Main%20Features6May%202014?opendocument&tabname=Summary&prodno=6306.0&issue=May%202014&num=&view=) in the May 2014 release in order to assist users interpret the difference between the two concepts.

44 In addition for May 2014 Survey of Employee Earnings and Hours, two further changes were made to data collection. Actual age replaced age range reporting and enabled the derivation of average age data. Collection of hours paid for was extended to include Managerial employees where possible.

Confidentialised Unit Record File (CURF)

45 The ABS intends to produce a CURF from the 2018 Survey of Employee Earnings and Hours. This will be an Expanded CURF and it will only be accessible through the Remote Access Data Laboratory (RADL) and ABS Data Laboratory (ABSDL). The CURF will be available in SAS, STATA and SPSS formats. It is intended that the CURF will be available in mid-2019.

46 Further information about ABS microdata, including conditions of use, is available via the [Microdata \(https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Microdata+entry+page\)](https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Microdata+entry+page) section on the ABS web site.

Related publications

47 Users may also wish to refer to the following publications:

- [Australian Labour Market Statistics \(https://www.abs.gov.au/ausstats/abs@.nsf\)](https://www.abs.gov.au/ausstats/abs@.nsf)

[/mf/6105.0](#)) (cat. no. 6105.0);

- [Average Weekly Earnings, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0>) (cat. no. 6302.0) - issued biannually;
- [Employee Earnings, Benefits and Trade Union Membership, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0>) (cat. no. 6310.0);
- [Employment and Earnings, Public Sector, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6248.0.55.002>) (cat. no. 6248.0.55.002) - issued annually.
- [Information Paper: Changes to ABS Measures of Employee Remuneration](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6313.0>) (cat. no. 6313.0) - issued 14 Nov 2006;
- [Labour Force, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0>) (cat. no. 6202.0) - issued monthly;
- [Labour Statistics: Concepts, Sources and Methods](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6102.0.55.001>) (cat. no. 6102.0.55.001);
- [Household Income and Wealth, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6523.0>) (cat. no. 6523.0);
- [Wage and Salary Earner Statistics for Small Areas, Time Series](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/5673.0.55.003>) (cat. no. 5673.0.55.003); and
- [Wage Price Index, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6345.0>) (cat. no. 6345.0) - issued quarterly.

Rounding

48 Estimates of average earnings shown in the tables and data cubes are rounded to the nearest 10 cents and those of average weekly hours paid for are rounded to the first decimal place. Where figures have been rounded, discrepancies may occur between sums of the component items and totals. Cell annotations have been applied based on unrounded data for tables in this release.

Technical note - sampling error

Reliability of estimates

1 As the estimates in this release are based on information relating to a sample of employers and employees, rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers and all employees. The difference, called

sampling error, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as non-sampling error and may occur in any enumeration whether it be a full count or a sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

2 The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the standard error, which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors.

3 An example of the use of a standard error is as follows. If the estimated average weekly total cash earnings for all employees paid by individual arrangement is \$1,506.50, with a standard error of \$15.40, there would be about two chances in three that a full enumeration would have given an estimate in the range \$1,491.10 to \$1,521.90 and about nineteen chances in twenty that it would be in the range \$1,475.70 to \$1,537.30.

4 The difference between two survey estimates is also an estimate and it is therefore subject to sampling variability. The standard error on the difference between two survey estimates in the one time period (i.e. $x - y$) can be calculated using the following formula:

$$SE(x - y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

5 The formula above will overestimate the standard error where there is a positive correlation between two estimates (e.g. average weekly earnings for male and female school teachers). While this formula will only be accurate where there is no correlation between two estimates (e.g. estimates from different states), it is expected to provide a reasonable approximation of the standard error for the difference between two survey estimates.

6 The estimated average weekly total cash earnings for all male employees is \$1,525.40, with a standard error of \$12.60. For all female employees the estimated average weekly total cash earnings is \$1,053.30, with a standard error of \$9.30. Thus the difference between the estimate of male and female earnings is \$472.10. The estimate of the standard error of the difference between the average weekly total cash earnings employees of males and females is:

$$SE(\$1525.40 - \$1053.30) = \sqrt{(\$12.60)^2 + (\$9.30)^2} = \$15.70$$

7 There are about two chances in three that the true figure for the difference between average weekly total cash earnings for males and females lies in the range \$456.40 to

\$487.80 and about nineteen chances in twenty that the figure is in the range \$440.70 to \$503.50.

8 The formula above can be used to estimate the standard error on a difference between estimated averages in two different years. (The movement standard error will be approximately 1.4 times the standard error on the level estimate, if the standard errors on the two level estimates are similar).

9 Another measure of the sampling error is the relative standard error, which is obtained by expressing the standard error as a percentage of the estimate.

10 An asterisk appears against an estimate in this release where the sampling variability is considered high. For the tables in this release, estimates with relative standard errors above 25% have been labelled with a cell comment. Cell comments labelled on estimates with a relative standard error above 25% (i.e. relative standard error of 25% to 50% or relative standard error greater than 50%) have been applied based on unrounded data.

11 Standard errors can be used to construct confidence intervals around the estimated proportions. There are about two chances in three that the 'true' value is within the interval that ranges from the sample estimate minus one standard error (estimate - 1xSE) to the sample estimate plus one standard error (estimate + 1xSE). There are approximately 19 chances in 20 that the 'true' value lies within the interval from the estimate minus two standard errors (estimate - 2xSE) to the estimate plus two standard errors (estimate + 2xSE).

12 The above rule gives a symmetric confidence interval that is reasonably accurate when the estimated proportion is not too near 0.00 or 1.00. Where the estimated proportion is close to 0.00 or 1.00 it would be more accurate to use a confidence interval that was not symmetric around the sample estimate. If an estimate is close to 1.00, then the upper boundary of the confidence interval should be closer to the sample estimate than suggested above, while the lower boundary should be further from the sample estimate. Similarly, if an estimate is close to 0.00, then the lower boundary of the confidence interval should be closer to the sample estimate than suggested above, while the upper boundary should be further from the sample estimate. In particular, the symmetric confidence interval could include values that are not between 0.00 and 1.00. In such a case a good rule of thumb is to use a confidence interval of the same size as the symmetric one, but with the lower (or upper) boundary set to 0.00 (or 1.00).

13 Each data cube contains estimates of standard errors from which confidence intervals may be constructed.

Glossary

Show all

Adult rate

Payment at the full rate stipulated in an award, agreement or the minimum wage order in the relevant jurisdiction.

Apprentice or trainee rate

Payment at a rate stipulated for apprentices or trainees in an award, agreement or the minimum wage order in the relevant jurisdiction.

Average (mean) earnings

The earnings amount obtained by dividing the total earnings of a group (e.g. full-time employees) by the number of employees in that group.

Award only

Awards are legally enforceable determinations made by federal or state industrial tribunals that set the terms of employment (pay and/or conditions), usually in a particular industry or occupation.

An award may be the sole mechanism used to set the pay and/or conditions for an employee or group of employees, or may be used in conjunction with an individual or collective agreement. Employees are classified to the Award only category if they are paid at the rate of pay specified in the award, and are not paid more than that rate of pay.

Cash earnings

Remuneration paid to employees on a regular and frequent basis (quarterly or more frequently) for time worked or work done, and for time not worked such as recreation and other types of leave. Cash earnings (inclusive of amounts salary sacrificed) are gross amounts, that is, before tax and other items (e.g. superannuation) are deducted.

Casual employees

Casual employees usually receive a higher rate of pay to compensate for lack of permanency and leave entitlements.

Collective agreement

An agreement between an employer (or group of employers) and a group of employees (or one or more unions or employee associations representing the employees). A collective

agreement sets the terms of employment (pay and/or conditions) for a group of employees, and is usually registered with a Federal or State industrial tribunal or authority.

Employees are classified to the Collective agreement category if they had the main part of their pay set by a collective agreement (registered or unregistered) or enterprise award.

Disability rate

Payment rate stipulated in the National Minimum Wage Order (or an award or agreement with a specific schedule) for employees with a disability who:

- are unable to perform the range of duties to the competence level required of an employee within the class of work for which the employee is engaged because of the effects of disability on their productive capacity; and
- who meet the impairment criteria for receipt of a Disability Support Pension.

Employees

Persons who worked for a private or public sector employer and received pay for the reference period in the form of wages or salaries, a commission while also receiving a retainer, tips, piece rates or payments in kind. Persons who operated their own incorporated enterprises with or without hiring employees are also included as employees.

Employer size

A measure of the size of the business in terms of the number of employees within that business. The employer size reflects the size of the business in a particular state or territory and not necessarily the size of the business Australia-wide.

Full-time employees

Full-time employees are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

Individual arrangement

An arrangement between an employer and an individual employee on the terms of employment (pay and/or conditions) for the employee. Common types of individual arrangements are individual contracts, letters of offer and common law contracts.

Employees are classified to the Individual arrangement category if they have their pay set by an individual contract, individual agreement registered with a Federal or State industrial tribunal or authority (e.g. Australian Workplace Agreement), common law contract (including

for award or agreement free employees), or if they receive over-award payments by individual agreement.

However, the Fair Work Act 2009 does not allow the making of new individual employee agreements. Collective enterprise agreements contain a provision which allows flexibility in the workplace to be achieved by agreement between an employer and individual employee. Agreements which existed under the Workplace Relations Act will continue in existence under the Fair Work Act 2009 as 'agreement-based transitional instruments'. These are defined by the [Fair Work \(Transitional and Consequential Amendments\) Act 2009 \(TA Act\)](http://www.austlii.edu.au/au/legis/cth/consol_act/fwpacaa2009656/) (http://www.austlii.edu.au/au/legis/cth/consol_act/fwpacaa2009656/).

Industry

Industry is classified according to the [Australian and New Zealand Standard Industrial Classification, 2006](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>) (cat. no. 1292.0).

Junior rate

Payment at a proportion of the full adult rate stipulated in an award, agreement or the National Minimum Wage Order in the relevant jurisdiction, based on age.

Managerial employees

Employees who have strategic responsibilities in the conduct or operations of the organisation and/or are in charge of a significant number of employees. These employees usually do not have an entitlement to paid overtime. Includes professionally qualified staff who primarily perform managerial tasks in conjunction with utilising their professional skills. Owner managers of incorporated enterprises are regarded as managerial employees.

Median earnings

The amount of earnings which divides employees into two groups containing equal numbers of employees, one half with earnings below the median and the other half with earnings above the median. The median is less affected by outliers and skewed data than the mean, and is usually the preferred measure of central tendency when the distribution is not symmetrical.

Method of setting pay

How an employee's pay is set. Methods are classified to one of the following categories: Award only; Collective agreement; Individual arrangement; or Owner manager of incorporated enterprise.

Non-managerial employees

Employees who are not managerial employees (as defined above), including non-managerial professionals and some employees with supervisory responsibilities.

Occupation

Occupation is classified according to the [Australian and New Zealand Standard Classification of Occupations, 2013 \(Version 1.2\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0>) (cat. no. 1220.0).

Ordinary time cash earnings

Payment for award, standard or agreed hours of work, including allowances, penalty payments, payments by measured result and regular bonuses and commissions. Ordinary time cash earnings are inclusive of amounts salary sacrificed. Excluded are non-cash components of salary packages, overtime payments, retrospective pay, pay in advance, leave loadings, severance pay, and termination and redundancy payments.

Ordinary time hours paid for

Award, standard or agreed hours of work, paid for at the ordinary time rate. Included is stand-by or reporting time which is part of standard hours of work, and that part of annual leave, paid sick leave and long service leave taken during the reference period.

Overtime earnings

Payment for hours worked in excess of award, standard or agreed hours of work.

Overtime hours paid for

Hours paid for in excess of award, standard or agreed hours of work. Overtime hours paid for was not collected for managerial employees.

Owner manager of incorporated enterprise

A person who works in their own incorporated enterprise - that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company). Owner managers of incorporated enterprises are presented separately in estimates by method of setting pay.

Part-time employees

Employees who normally work less than the agreed or award hours for a full-time employee in their occupation. If agreed or award hours do not apply, employees are regarded as part-time if they ordinarily work less than 35 hours per week.

Percentile

Any of a hundred divisions of an earnings or hours distribution. For example:

- 25% of employees earn less than or equal to the 25th percentile
- 75% of employees earn less than or equal to the 75th percentile.

Permanent or fixed term employees

Permanent employees are usually employed on an ongoing basis and are entitled to paid annual and sick leave. Fixed term employees are employed for a specified period of employment, and may be entitled to paid leave.

Reference period

The survey refers to the last pay period ending on or before 18 May 2018. All estimates of earnings and hours in this release are weekly. For employees paid other than weekly, estimates of earnings and hours have been converted to a weekly basis.

Salary sacrifice

Salary sacrifice is defined as an arrangement where an employee agrees to forgo part of their pre-tax salary in return for benefits. Common types of salary sacrifice arrangements include pre-tax contributions to superannuation funds and novated leases for motor vehicles.

Sector

Public sector comprises local government authorities and all government departments and agencies created by, or reporting to, the Commonwealth, or State/Territory Parliaments. The private sector comprises all organisations not classified as public sector.

Total hours paid for

The sum of ordinary time hours paid for plus overtime hours paid for.

Weekly total cash earnings

The sum of weekly ordinary time cash earnings plus weekly overtime earnings.

Quality declaration - summary

Institutional environment

1 For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance

arrangements, and mechanisms for scrutiny of ABS operations, please see [ABS Institutional Environment \(https://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae00197b65\)](https://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae00197b65).

Relevance

2 The biennial Survey of Employee Earnings and Hours (EEH) produces statistics on the composition and distribution of earnings of employees, the hours for which they are paid, and the methods used to set their pay. Information is collected about the characteristics of employers, such as industry and sector, and their employees, such as occupation, type of employee, and method of setting pay. The principle users of the survey are located within Commonwealth and State government agencies, employer associations, industrial tribunals and unions. The estimates represent a critical information source for the Fair Work Commission and the Department of Employment. The survey also serves as an important data source for other ABS statistics such as the Wage Price Index.

3 Estimates are available by state/territory, industry, sector, occupation, sex, rate of pay (adult, junior, apprentice or trainee and disability), age group, managerial status, employee type, employer size, permanent/fixed term contract/casual status, full-time/part-time status and methods of setting pay.

Timeliness

4 The reference period for the 2018 Survey of Employee Earnings and Hours is the last pay period ending on or before 18 May 2018.

5 EEH estimates are released approximately eight months after the reference period for the May 2018 edition.

Accuracy

6 Information for the EEH survey is collected via web form questionnaires from a sample of approximately 8,200 private and public sector employers selected from the ABS Business Register. The employer sample is stratified by state, sector, industry division and employment size to ensure adequate state, sector and industry representation. These employers select a sample of employees from their payroll(s) using instructions provided by the ABS. Approximately 53,000 employees are sampled. A target minimum response rate is 95% for the survey as a whole and 95% for each state and industry.

7 There are two principal sources of error in surveys, sampling error and non-sampling

error. Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise non-sampling error by the careful design and testing of questionnaires, detailed checking of the reported data and direct follow up with providers where significant errors are detected.

8 Sampling error occurs when a sample or subset of the population is surveyed rather than the entire population. One measure of the likely difference resulting from not including all of the population in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the whole population had been included in the survey.

Coherence

9 The EEH survey has been conducted, either annually or biennially, since 1975. The survey has been biennial since 1996. Ordinarily, the survey is conducted in respect of the last pay period ended on or before the third Friday in May of the reference year. The 2008 EEH survey, however, was conducted in respect of the last pay period ended on or before the third Friday in August.

10 Estimates of employee earnings produced from the EEH survey are based on the Australian conceptual framework for measures of employee remuneration. From 2006, the measure of employee earnings for estimates produced from the survey is regular wages and salaries in cash (including amounts salary sacrificed), that is, cash earnings. Prior to 2006, estimates of employee earnings excluded amounts salary sacrificed by employees. Estimates from the 2002 and 2004 surveys have also been reproduced on the new conceptual basis as an aid to analysis, and broad level estimates for these years were included in the electronic data release accompanying the May 2006 publication.

11 Data on how employees' pay was set in the reference period have been collected in the survey since 2000. The 2000 survey collected data on whether all or any part of employees' pay was set by an individual arrangement, collective agreement, award, or a combination of these. From 2002, each survey cycle has collected information on whether the main part of employees' pay was set by an individual arrangement, collective agreement or award.

12 The EEH Survey uses Australian standard classifications to facilitate data comparability across statistical series. Industry data from August 2008 onwards are classified according to the [Australian and New Zealand Standard Industrial Classification, 2006](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>) (cat. no. 1292.0). Data for earlier series are classified to the 1993 edition of ANZSIC. Since May 2014, data on employee occupation are classified according to the [Australian and New Zealand Standard](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0)

[Classification of Occupations, 2013 \(Version 1.2\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/1220.0) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/1220.0>) (cat. no. 1220.0). From May 2006 to May 2012, the classification used is the [Australian and New Zealand Standard Classification of Occupations, 2006 \(First Edition\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F6A0BB67C088F217CA2575DF001CADC7?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F6A0BB67C088F217CA2575DF001CADC7?opendocument>) (cat. no. 1220.0). Data for earlier series, issued since 1996, are classified to the [Australian Standard Classification of Occupations, 1997 \(Second Edition\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4B8C877612EC0AE4CA2571E5007A6B27?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4B8C877612EC0AE4CA2571E5007A6B27?opendocument>) (cat. no. 1220.0).

13 The ABS conducts a number of sample surveys of businesses which collect information about employee earnings, or other measures of employee remuneration, and estimates of numbers of employees, including the Survey of Average Weekly Earnings and the Labour Force Survey. Care should be taken when comparing estimates of average weekly earnings compiled from the EEH survey with those published biannually in [Average Weekly Earnings, Australia](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0>) (cat. no. 6302.0) because of differences in the earnings concepts being measured, methodological differences between the surveys and differences in the two samples used. Estimates of numbers of employees from the Survey of Employee Earnings and Hours are published for the first time in May 2010. Users are directed to [Labour Force, Australia](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0>) (cat. no. 6202.0) as the primary source of official ABS statistics of employment. Caution should be exercised when comparing estimates of numbers of employees from EEH with those published monthly in [Labour Force, Australia](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0>) (cat. no. 6202.0) as there are a number of differences in sample design, survey methodology and scope and coverage, between the two collections.

Interpretability

14 Employee Earnings and Hours, Australia, May 2018 (cat. no. 6306.0) contains Explanatory Notes, a Glossary and a Technical Note which provide further information about data sources, terminology and other technical aspects of the series.

15 A feature article A Guide to Understanding Employee Earnings and Hours Statistics has been released with the EEH 2018 publication to assist in appropriate interpretation and use of EEH data.

Accessibility

16 Employee Earnings and Hours, Australia, May 2018 (cat. no. 6306.0) is available electronically from the ABS website and includes downloadable Excel data files.

17 If the information you require is not available as a standard product or service, then ABS Consultancy Services can help you with customised services to suit your needs. Inquiries should be made to the National Information and Referral Service on 1300 135 070. The ABS Privacy Policy outlines how the ABS will handle any personal information that you provide to us.

Abbreviations

Show all

ABN	Australian Business Number
ABR	Australian Business Register
ABS	Australian Bureau of Statistics
ABSBR	Australian Bureau of Statistics Business Register
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
EEH	Survey of Employee Earnings and Hours
EG	Enterprise Group
LE	Legal Entity
PAYGW	Pay As You Go Withholding
SISCA	Standard Institutional Sector Classification of Australia
TAU	Type of Activity Unit
TOBE	Type of Business Entity
TOLO	Type of Legal Organisation